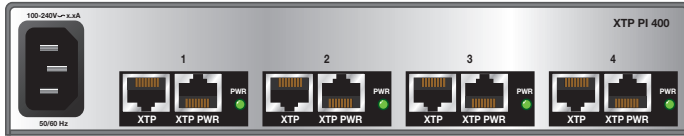# XTP PI 400 Power Injector • Setup Guide

The Extron XTP PI 400 Power Injector is a midspan power injector for XTP products. It provides power over LAN for up to four XTP endpoints. This guide provides instructions for an experienced installer to install and connect the XTP PI 400.
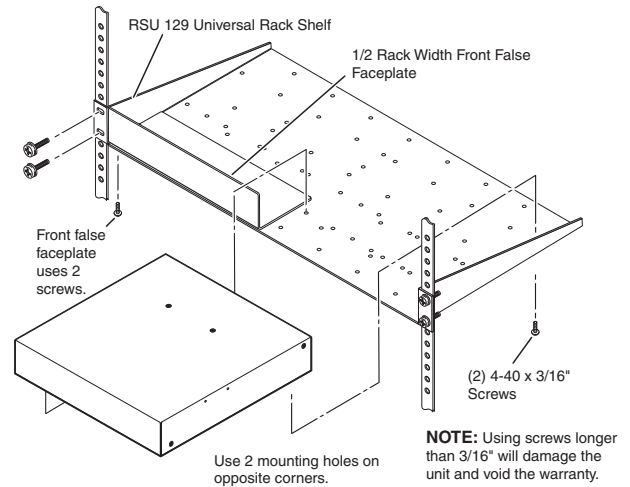
Rear Panel

Front Panel

Installation

> **WARNING:** **Risk of electrical shock.** To reduce the risk of fire or electric shock, do not expose this apparatus to rain, moisture, dripping, splashing, or objects filled with liquids.

Step 1 — Mounting

The XTP PI 400 is 1U high and one-half rack wide.

a. Turn off or disconnect all equipment power sources.

b. Mount the XTP PI 400 in a rack shelf (see the image to the right) or under a desk using an optional mounting kit.

RSU 129 Universal Rack Shelf

1/2 Rack Width Front False Faceplate

Front false faceplate uses 2 screws.

(2) 4-40 x 3/16" Screws

NOTE: Using screws longer than 3/16" will damage the unit and void the warranty.

Use 2 mounting holes on opposite corners.

Step 2 — Cabling

> **ATTENTION:** Do not connect this device to a computer data or telecommunications network.

> **NOTE:** The XTP PI 400 does not switch XTP signals.

For the best performance, see **Twisted Pair Cable Termination and Recommendations** on page 2.

a. Using a CATx cable, connect an Extron XTP device to the XTP connector on one of the four port pairs. The XTP device plugged into this connector must be powered by a local power source.

b. Using a CATx cable, connect an XTP device that requires power from an external source to the XTP Pwr connector.

c. Repeat steps 2a and 2b for each XTP port pair as necessary.

◄ **To an XTP Device**

To an XTP Device that Requires an External Power Supply ►
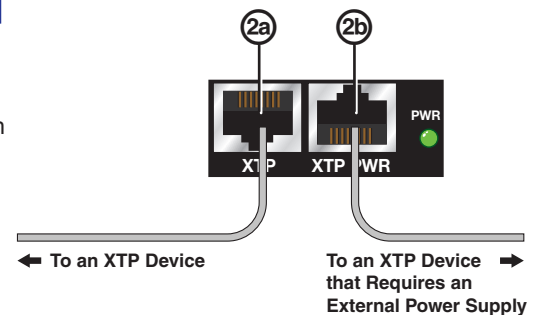
> **NOTE:** Do not loop XTP port pairs on a single cable run to remotely power the transmitter and receiver. Figure 2, below, shows this type of application, which is **not** recommended by Extron.
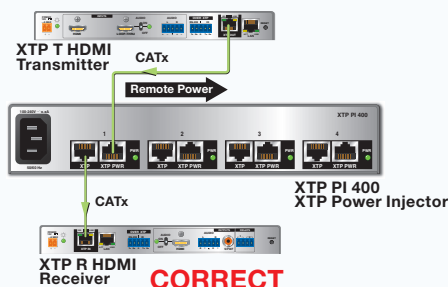>
> XTP T HDMI Transmitter
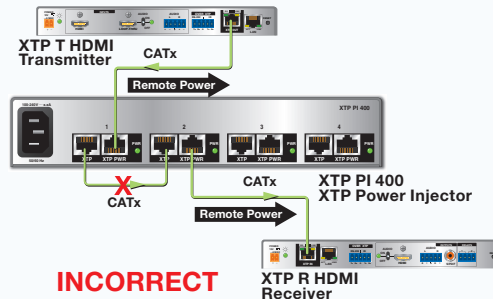> CATx
> Remote Power
> XTP PI 400 XTP Power Injector
> CATx
> XTP R HDMI Receiver
> **CORRECT**
> **Figure 1.** Correct Application
>
> XTP T HDMI Transmitter
> CATx
> Remote Power
> XTP PI 400 XTP Power Injector
> CATx
> CATx
> Remote Power
> XTP R HDMI Receiver
> **INCORRECT**
> **Figure 2.** Incorrect Application

d. Connect AC power to the XTP PI 400.

Features

Indicators

① **Front panel power LED indicator** — Lights to indicate the XTP PI 400 is receiving power.

② **Front panel XTP Power Out LED indicators** — Light when the XTP PI 400 is providing power to XTP endpoints.

> **NOTE:** If the last connected endpoint draws more power than the XTP PI 400 can provide, the corresponding XTP Power Out LED indicator blinks, indicating the output cannot be powered because too much power is being drawn from the XTP PI 400. Disconnect the endpoint to correct the issue.
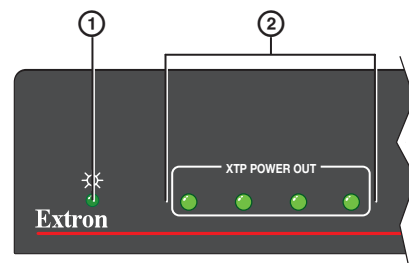
Front Panel

③ **Rear panel Pwr LED indicators** — Light or blink to indicate various power states of the connected endpoints (see the table below for LED states).

LED State	Port Status
Unlit	The endpoint is not connected or cannot be powered.
Lit	The endpoint is receiving power from the XTP PI 400.
Blinks five times	There is a power overload fault.
Blinks nine times	The power allocation is exceeded.
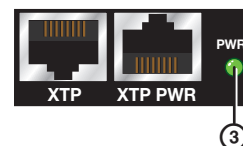
> **NOTE:** Blinking LEDs repeat the number of blinks specified in the table above after a short interval of remaining unlit.

Twisted Pair Cable Termination and Recommendations

Use the following pin configuration for twisted pair cables.

TIA/EIA T568B	
Pin	**Wire Color**
1	White-orange
2	Orange
3	White-green
4	Blue
5	White-blue
6	Green
7	White-brown
8	Brown

Pins:
12345678

Insert Twisted Pair Wires

RJ-45 Connector

Figure 3. Twisted Pair Cable Configuration

Supported cables

The XTP PI 400 is compatible with CAT 5e, 6, 6a, and 7 shielded twisted pair (F/UTP, SF/UTP, and S/FTP) and unshielded twisted pair (U/UTP) cable.

> **ATTENTION:**
> - Do not use Extron UTP23SF-4 Enhanced Skew-Free AV UTP cable or STP201 cable.
> - To ensure FCC Class A and CE compliance, STP cables and STP connectors are required.

Cable recommendations

Extron recommends using the following practices to achieve full transmission distances up to 330 feet (100 m) and reduce transmission errors.

- Use the following Extron XTP DTP 24 SF/UTP cables and connectors for the best performance:
  - **XTP DTP 24/1000**   Non-plenum 1000 feet (305 m) spool   22-236-03
  - **XTP DTP 24P/1000**   Plenum 1000 feet (305 m) spool   22-235-03
  - **XTP DTP 24 Plug**   Package of 10   101-005-02
- If you are not using XTP DTP 24 cable, at a minimum Extron recommends 24 AWG, solid conductor, STP cable with a minimum bandwidth of 400 MHz.

- Terminate cables with shielded connectors to the TIA/EIA T568B standard.
- Limit the use of more than two pass-through points, which may include patch points, punch down connectors, couplers, and power injectors. If these pass-through points are required, use CAT 6 or 6a shielded couplers and punch down connectors.

> **NOTE:** Using more than three patches with the XTP PI 400 yields varying maximum cable lengths. Limit the use of RJ-45 patches in the system.

Number of Patches	Maximum Transmission Distance
1 or 2	330 ft. (100 m)
3	280 ft. (85 m)

> **NOTE:** When using CAT 5e or CAT 6 cable in bundles or conduits:
> - Do not exceed 40% fill capacity in conduits.
> - Do not comb the cables for the first 20 m, where cables are straightened, aligned, and secured in tight bundles.
> - Loosely place cables and limit the use of tie wraps or hook and loop fasteners.
> - Separate twisted pair cables from AC power cables.

Applications

The XTP PI 400 can provide remote power to XTP extenders in a point-to-point installation (see figure 4). It can also provide power to XTP endpoints with an XTP matrix (see **figure 5** on the next page).
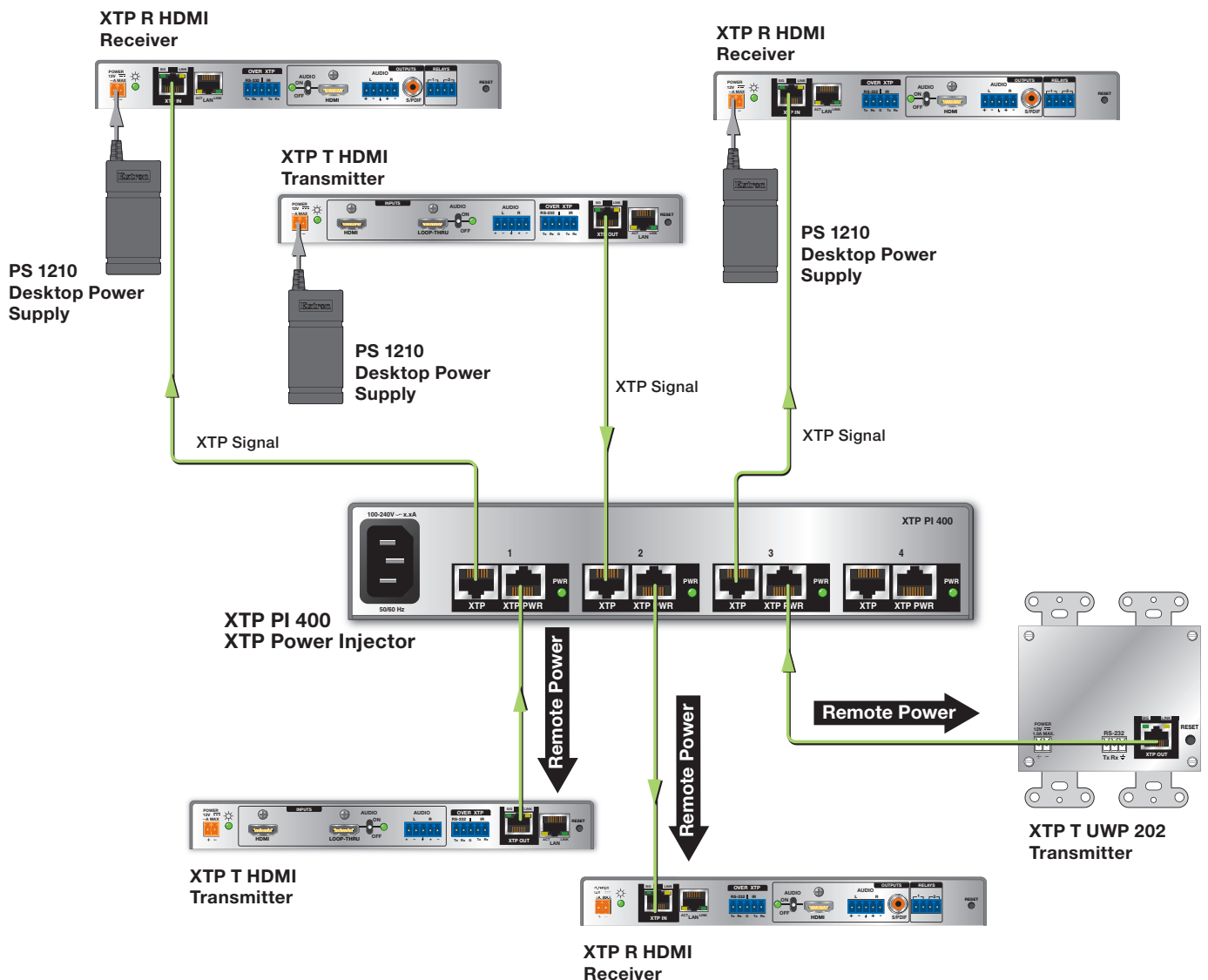

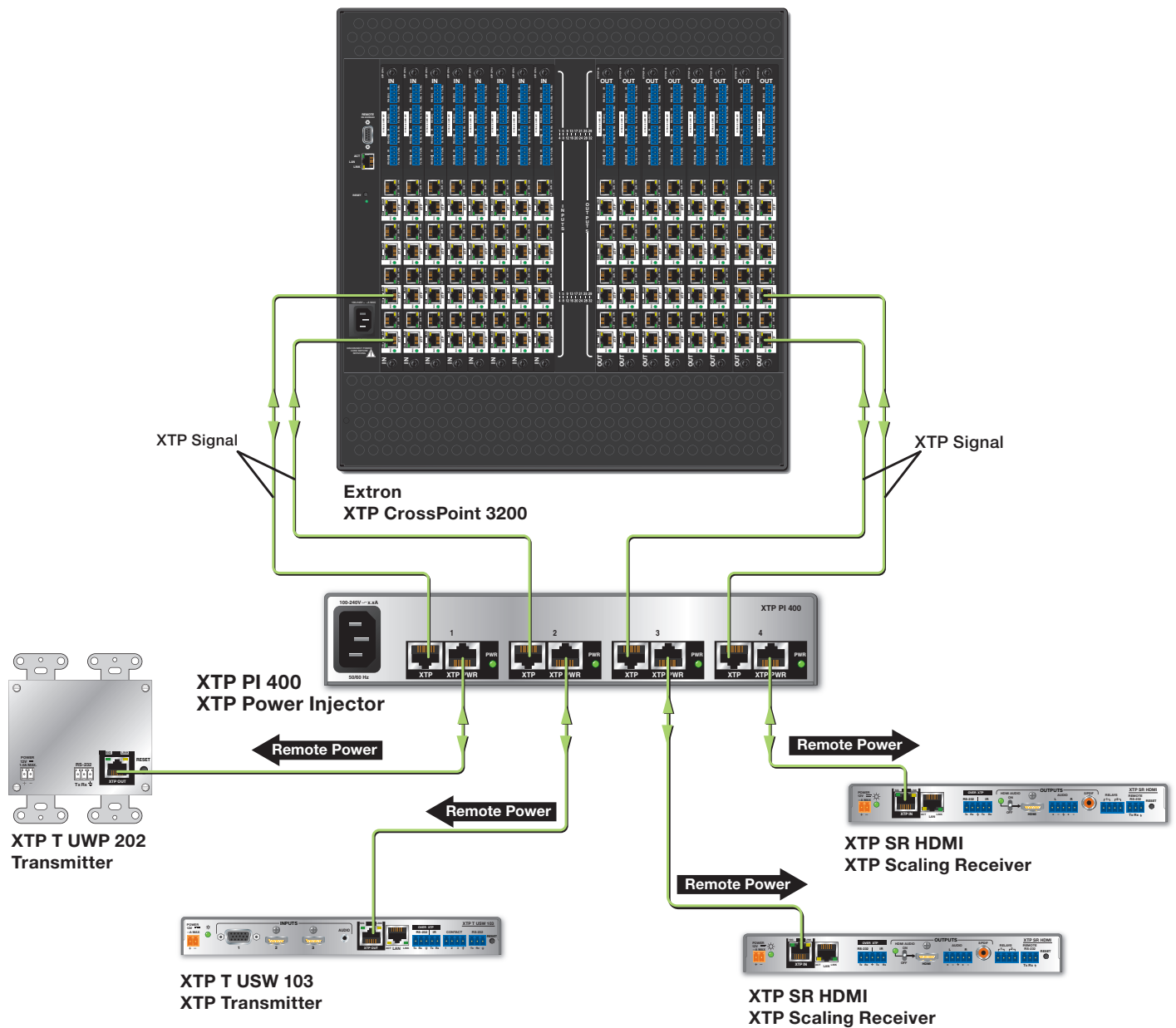**Figure 4.** Typical XTP PI 400 Point-to-point Application

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Figure 5. Typical XTP PI 400 Matrix Application

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